EXECUTIVE SUMMARY

HIV/AIDS Annual Report – March 2004
State of Arizona

Changes to the Report:

Changes in the HIV/AIDS epidemic have prompted the Centers for Disease Control in Atlanta (CDC) and the Arizona Department of Health Services (ADHS) to emphasize capacity building measures within state HIV/AIDS Epidemiology programs, and to focus on incidence measures. These activities will provide better quality, more comprehensive data and support to health departments and policy planning groups.

In prior reports, emphasis was placed upon cumulative cases. This practice will be discontinued in favor of incidence and prevalence estimates. Cumulative counts are not the same as prevalence (all HIV positive persons living within a given region), yet are often confused with prevalence. Cumulative counts are less informative than prevalence, since cumulative counts do not provide information about where persons are currently located, only where they were diagnosed. Current distribution of persons living with HIV/AIDS within Arizona is crucial to planning for care and services, and prevention efforts.

In prior reports, estimates of incidence (newly reported, previously unknown cases within a given time period) were equated to diagnostic counts. This is problematic with AIDS diagnoses since persons previously reported as HIV positive may be subsequently diagnosed as AIDS when they meet one of the AIDS defining criteria. Such cases are not properly counted in an estimate of incidence since they are not new cases, only a new diagnosis based upon a progression of illness. In this report, estimates of incidence are based upon the sum of new HIV cases, and new AIDS cases which were not diagnosed as HIV positive in any prior calendar year. Persons who were diagnosed with both HIV and AIDS in the same calendar year are counted only as AIDS to avoid double counting. While this method has some limitations, it is the best current method for approximating incidence.

In prior reports, categorical data for race/ethnicity, gender, mode of transmission, and age have been reported as cumulative counts back to 1981. These can mask new trends since they contain data from a long span of time. The span of data covered in this report is limited to help define emergent trends.

Differences in population density among the fifteen Arizona counties must be statistically controlled through standardization of case rates in order to draw valid comparisons. Prior reports have not included standardized rates, which obscured comparisons and diminished the useful potential of the data. Case rates per 100,000 are included throughout this report.

Sparsely populated regions will experience much larger fluctuations in rates (statistical variance) with changes of only a few cases. To avoid confusion over these wider variances, percentages of statewide totals for the year are reported. When rates and percentages for a county's reported case count are considered together, their scope of impact within the statewide epidemic can be better evaluated.

Statewide AIDS cases by disease category (AIDS-defining illnesses such as Kaposi's Sarcoma and opportunistic infections such as TB) will no longer be included in favor of more expansive data reporting for individual counties, including current (3/10/04) estimated prevalence, 2003 reported case counts, and the annual population estimate for the county. Prevalence will not be calculated for prior years due to questions of accuracy resulting from limitations within the HIV/AIDS database structure. CDC population estimates are used for population measures from 1990 to 2003.

Current Data:

Cumulative counts:
Since 1981, the year for which initial HIV/AIDS cases were reported in Arizona, there have been a total of 9,216 AIDS cases reported to ADHS that were diagnosed in Arizona, and 5,573 cases of HIV (non-AIDS) reported to ADHS that were diagnosed in Arizona. There were an additional 1,145 cases of AIDS, and 224 cases of HIV reported to ADHS of persons diagnosed outside of Arizona, who are reported to reside within the state. Also, 150 of those persons diagnosed with HIV only, and 355 of those persons diagnosed with AIDS in Arizona are now reported to reside outside of the state.

Mortality:
ADHS HIV/AIDS Epidemiology recently completed an exhaustive review and update of certified deaths among persons with HIV/AIDS. Currently 7.5% of HIV cases and 56.7% of AIDS cases are known to be deceased. The percentage of AIDS cases reported as deceased prior to this review in the August 2003 semi-annual report was 53%. The apparent increase in AIDS mortality of nearly 500 persons since the August 2003 semi-annual report is mostly the result of the review of certified deaths. In total, this effort has corrected over 810 records where persons who in fact were deceased had been previously counted as living.

The annual number of deaths among persons with AIDS in the state declined in the late 1990s. Between 1999 and 2002 the number of deaths among persons with HIV or AIDS has remained level (193 in 1999, 186 in 2002). Because of reporting delays, the numbers for 2003 are lower. However the proportion of reported deaths to reported new cases of HIV disease for 2003 is similar to proportions in the prior 4 years.

AIDS from prior HIV:
Of the cumulative 10,810 reported AIDS cases (all reports since 1981, both living and deceased), 49.8% (5,388) were initially diagnosed as HIV, and then reported as AIDS to ADHS at a later date. These cases of AIDS (from prior known HIV cases) represent a progression of illness but are not new cases of HIV disease, although they are new AIDS

diagnoses. During the last 5 years the proportion of such cases of AIDS from prior known HIV among all AIDS diagnoses was 43.0%.

Prevalence:

Arizona currently has 9,652 persons known to be living with HIV Disease (HIV or AIDS), of whom 4,402 have a diagnosis of AIDS, and 5,250 have a diagnosis of HIV (not AIDS). The state as a whole has a known HIV disease prevalence rate of 184.1 per 100,000 persons. Based on current prevalence estimates, at least 1 of every 543 persons in Arizona carries HIV. These cases of HIV and AIDS are disproportionately distributed within Arizona. Pima County, the state's second most populous urban county, has the highest prevalence rate of reported HIV Disease (212 per 100,000). Pima County, with 16.4% of the state's population, has 19.7% of known AIDS prevalence and 18.1% of known HIV prevalence. Maricopa County, the state's most populous urban county, has the second highest prevalence rate of reported HIV Disease (207 per 100,000). With 60.0% of the state's population, it has 67.8 % of known AIDS prevalence and 66.7% of known HIV prevalence. The remaining cases (12.5% of known AIDS prevalence and 15.2% of known HIV prevalence) are located within the other 13 counties with a combined total of 23.7% of the state's population, and a mean known prevalence rate of 86 per 100,000, roughly 40% of the rate for Maricopa and Pima counties.

Incidence:

In the past decade, the rate for AIDS diagnoses has shown a steady decline from 14.7 per 100,000 in 1990 to 9.1 per 100,000 in 2002 (up from a rate of 8.1 per 100,000 in 2000 and 2001). Meanwhile, the rate for HIV diagnoses appears to be increasing, from 7.0 per 100,000 in 1999 to 8.8 per 100,000 in 2002. The annual rate of AIDS diagnosis in the state of Arizona is roughly 60% of the national rate. A new program, the Incidence Surveillance Project, will allow ADHS and the CDC to investigate whether the recent increase in HIV cases both in Arizona and nationally is due to the reporting of recent infections or the reporting of newly discovered, yet older, infections.

Gender trends:

Throughout the epidemic in Arizona, the majority of AIDS and HIV cases have been male, with men comprising 86.1% of all in-state HIV diagnoses, 90.6% of all in-state AIDS diagnoses, and 87.0% of current known prevalence. But the proportion of female cases has been increasing. For the three-year period from 1985 to 1987, 7.4% of AIDS cases were female, whereas the three-year period from 2000 to 2002, it was 13.1%.

Age trends:

More persons were diagnosed with AIDS over the past 5 years in Arizona in the 35-39 year age range than in any other age group (515 cases). Next largest was the 40-44 year age group (451). With HIV diagnoses over the past 5 years the largest counts are virtually the same for both the 30-34 (385), and 35-39 (380) year age groups. There have been no cases of pediatric (under age 13) AIDS or HIV diagnosis reported to ADHS for 2003. But reporting delay can cause incomplete annual counts months after a calendar year ends. Only one Arizona case of pediatric HIV infection was reported to ADHS in the last 2 years. The 5-year incidence of new cases of HIV and AIDS among persons under 13 has

been 18 (13 HIV, and 5 AIDS cases), and the 3-year incidence has been 6 (3 HIV, and 3 AIDS cases). Despite the high statistical variance observed with low counts, this may suggest a declining trend, but further observation is needed.

Race/Ethnicity trends:

The proportion of AIDS cases among non-Hispanic Whites in Arizona is steadily declining. In the 1980's, when non-Hispanic Whites were about 75% of the state population, 83% of AIDS cases reported in Arizona were among this group. In 1994, the year following the expansion of the inventory of AIDS-defining illnesses, non-Hispanic Whites were 69.9% of the state population, and accounted for 70% of AIDS cases reported in Arizona. By 2001 non-Hispanic Whites had declined to 64.3% of the state population, and accounted for 56.2% of AIDS cases reported in Arizona. During that same time period AIDS has been increasing among all other groups combined, representing 35.7% of the state population, but accounting for 43.8% of the state's reported AIDS cases. Most notable in this category are non-Hispanic Blacks, just 3.1% of Arizona's population, who accounted for 12.6% of the reported state AIDS cases in 2001. This disproportionate impact is not seen among Hispanics, who were 25.6% of the state population in 2001, and accounted for 24.9% of the state's reported AIDS cases that year.

Risk/Transmission mode trends:

The predominant reported mode of transmission of HIV in Arizona continues to be men-having-sex-with-men (MSM) which accounts for 70.3% of reported new cases of HIV disease among males (HIV or AIDS), and 62.6% of all reported new cases of HIV disease in 2003. After MSM, injection drug use (IDU, with or without MSM) accounts for 20.1%, and heterosexual exposure accounts for 11.1% of reported new cases of HIV disease in Arizona during 2003. During the last 5 years the proportion of cases for which MSM is the sole risk among all cases has steadily increased. In 1999 MSM accounted for 49.6% of HIV, 55.0% of AIDS, and 51.6% of new HIV/AIDS cases. By 2003, MSM accounted for 64.2% of HIV, 60.3% of AIDS, and 62.6% of new HIV/AIDS cases. Among all risk categories, MSM is the only category increasing in relative percentage of annual cases.